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**Inter-Organizational Strategizing  
As Extension of Sensemaking Capacities**

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# **INTER-ORGANIZATIONAL STRATEGIZING AS EXTENSION OF SENSEMAKING CAPACITIES**

## **ABSTRACT**

In the wake of progressive globalization and accelerating speed of change, corporations are increasingly faced with so-called meta-problems, whose complexity tends to outstrip the sensemaking capacities of individual organizations. As a response to that, organizations are increasingly engaging in inter-organizational sensemaking activities in order to develop a collective understanding of these meta-problems to inform their intra-organizational attempts at dealing with them. In this paper, we propose to conceptualize such inter-organizational strategizing processes as scaffolding of sensemaking capacities. Based on a longitudinal case study of a multi-sector industry initiative concerned with the meta-problem of water as an environmental resource constraint, we explore the different practices and patterns in which individual organizations extend their respective sensemaking capacities. We identify three categories of extension practices (scaffolding practices, conduct practices, transfer practices) and three patterns of extension (extension for triggering sensemaking, complementary extension, selective extension). Overall, we contribute to the literature on strategy-as-practice, the wider sensemaking literature and the literature on inter-organizational strategy.

**KEYWORDS:** Inter-organizational strategizing, sensemaking capacity, scaffolding, sensemaking practices, process patterns, strategy-as-practice

## INTRODUCTION

In the wake of progressive globalization and accelerating speed of change, inter-organizational strategizing activities become increasingly relevant for organizations as macro-events impinge upon organizations in unexpected ways (Huff et al. 2010, p. 203). Corporations have to respond more and more to so-called 'meta-problems' (Hardy et al. 2006, Selsky & Parker 2005) whose complexity exceeds the scope and capacities of single organizations (Westley & Vredenburg, 1997) to make sense of them. One example for such metaproblems – which are issues of industry-wide strategic significance – is the impact of climate change and its interdependencies with other issues such as food and energy. Another example of increasing strategic importance is water with its uncertainties and risks around the availability of fresh water, conflicts around access to water due to water scarcity, as well as industry-specific issues such as waste water treatment and re-use. Hence, these kinds of problems call forth hitherto unseen requirements for “joined-up” thinking and collaborative strategizing. Resources such as multiple perspectives and internal (intra-organizational) information processing capacities are needed to generate the sort of interpretation necessary of how to respond to discontinuities associated with such issues. Consequently organizations are more and more engaging in inter-organizational strategic sensemaking processes in order to inform their intra-organizational strategic sensemaking.

While there is a wide literature on *intra*-organizational sensemaking within individual organizations (Weick 1995, Maitlis 2005), we know very little about processes of strategic sensemaking across organizations, such as when different organizations get together to examine and discuss metaproblems in order to support their individual sensemaking. In this paper we argue that such inter-organizational engagements can be described as attempts to extend the organizations' individual sensemaking capacities. Taking a strategy as practice perspective (Johnson et al 2007; Golsorkhi et al. 2010), we are particularly interested in the various micro activities that make up the inter- and intra-organizational sensemaking processes. This constitutes the focus of the present paper.

We argue that through *scaffolding* (Clark 1997, Orlikowski 2006) organizations are drawing on inter-organizational sensemaking processes and thereby extend their individual *sensemaking capacity* (Weick 2006). Hence these two sensemaking capacities are employed according to whether there is capacity of treating certain issues or metaproblems internally or whether they need to be shifted and extended by drawing on external scaffolding structures (Clark 1998, Lane

& Maxfield 2005) on the inter-organizational level in order to get the multiple perspectives necessary to make sense of them.

In this research we are interested in how the sensemaking capacity of individual organizations is scaffolded by drawing on inter-organizational sensemaking processes. Further, we want to explore what kinds of extension practices organizations draw on as well as in what ways organizations relate and engage with the inter-organizational sensemaking processes. Our research is led by the following research question:

*How and when do organizations scaffold their internal sensemaking capacities by engaging in inter-organizational strategizing initiatives?*

In order to address this exploratory research question, we use a longitudinal case study approach covering 6 years (2004 to 2010/ ongoing) to explore an inter-organizational strategizing process in a multi-sector industry initiative around an environmental resource constraint – water. As part of this initiative an inter-organizational working group on water was formed which started a workshop process in which they first developed a set of scenarios to better understand the problem of water by exploring the future impact and uncertainties of water for their organizations. Based on these understandings, several focus reports that looked into specific sets of water-related issues led to the development of a sensemaking procedure that enables participating companies how to measure and monitor their individual water footprints and thereby informs their respective strategizing as well as builds capacities to manage these issues. We established an account of the activities of this inter-organizational sensemaking process by drawing on and analysing several data sources. Data was collected through interviews, real-time observations, field notes and documents such as meeting minutes and internal reports.

In this study we identify different extension practices of how individual organizations are extending their sensemaking capacities to an inter-organizational process. Further, we identify three process patterns of how and when organizations extend their internal strategic sensemaking capacity. These process patterns exhibit different ways of how activities and practices were being used by participating organizations in the process.

With this research we contribute to three streams of literature. First, we advance research on Strategy-as-Practice which has called for empirical studies into the concrete micro practices that constitute inter-organizational strategizing process and content (Huff et al. 2010, Vaara et al.

2004). Second, we aim to contribute to research on sensemaking by exploring the role and specific practices of inter-organizational 'sensemaking capacities' as a means for participating organizations to extend their individual capacities and develop critical understandings and resources on how to manage issues and metaproblems (such as water) which they cannot approach individually, effectively. Further, our study aims to advance strategy research on collaborative strategy-making by exploring a further specific form of inter-organizational strategy-making from a sensemaking lens.

The paper is structured as follows. First we establish the theoretical foundations in which our research is rooted. Secondly, we outline the methodological approach for our analysis. Thirdly, we present our empirical case of an inter-organizational sensemaking process on water. We then present our findings followed by a discussion and conclusion which outlines our contributions to theory.

## **THEORETICAL BACKGROUND**

Recent research on strategy making has increasingly recognized that strategizing is a phenomenon that is not exclusively happening within but also beyond organizational boundaries occurring in interaction between members from multiple organizations (Astley & Fombrun 1983, Hardy et al. 2003, Vaara et al. 2004, Huff et al. 2010, Jarzabkowski et al. 2009, Ring & van de Ven 1994). In the existing literature we can find several different, partly overlapping streams of research addressing different aspects of it. One stream of research has been labelled as 'cooperative strategy-making' (Dyer & Singh 1998, Mintzberg et al. 2009) and 'collective strategy' (Astley & Fombrun 1983). It is mainly concerned with 'strategic networks' (Harrison et al. 2010, Gulati et al. 2000; Powell et al. 1996), 'industrial networks' (Gadde et al. 2003), 'joint ventures' (Harrigan 1985)] and other 'strategic alliances' (Vaara et al. 2004, Doz 1996, Faulkner 2006). Cropper and colleagues (2008) in this sense write:

“[...] most of the strategy research on IORs [inter-organizational relations] has tended to focus on particular manifestations of IORs, specifically on alliances and joint ventures, supply chains, and industrial districts.” (Cropper et al. 2008, p. 284)

This strategy literature on collaboration emphasizes the role of collaboration in helping organizations acquire resources and skills that cannot be produced internally (Dyer and Singh 1998; Gulati et al. 2000; Hamel, 1991; Hamel et al. 1989; Hennart 1988; Teece 1986; Williamson 1991). Yet, according to Dyer and Singh (1998, p. 660) “a firm's critical resources may extend beyond firm boundaries” and that “a firm's critical resources may span firm boundaries and may be embedded in interfirm routines and processes” (p. 661). Thus, strategy research began to look into aspects such as the role of cooperative strategy as a source of inter-organizational competitive advantage (Dyer & Singh 1998, Gulati 2007) and “how these forms of inter-organizational collaboration can improve strategic performance by, for example, helping to spread risk, share resources, enhance flexibility, increase access to technological know-how and information, enter new markets, and secure assets” (Johnson et al. 2003, p. 26).

Another stream of research has looked specifically at 'inter-organizational collaboration', which is defined by Hardy et al. (2003) as “a cooperative, interorganizational relationship that is negotiated in an ongoing communicative process, and which relies on neither market nor hierarchical mechanisms of control” (p. 323). According to this definition (see also Johnson et al. 2003), collaboration is an inter-organizational phenomenon yet it limits collaborative relationships to those that are not mediated by market mechanisms and also distinct from exchange and hierarchical relations that characterize markets. “Collaborative forms of inter-organizational interaction occur when neither formal authority nor a market is used to govern inter-organizational relationships.” (Johnson et al. 2003)

There have been recent studies (Hardy et al. 2006, Phillips et al. 2000, Clarke & Fuller 2010) that have looked further into the role of cross-sector (public-private) collaborative strategies. According to Hardy et al. (2005), collaboration (collaborative strategy) is enacted in a series of conversations between people, representing a variety of organisations, around a particular issue or so called “metaproblem” (Hardy et al. 2006, Selsky & Parker 2005) which are issues of industry-wide significance that are characterized by uncertainty, complexity and unclear boundaries. “Collaboration typically focuses on a single issue, or at best a subset of the wider issues that concern stakeholders [...]” (Hardy et al. 2006, p. 98) Thereby collaboration allows parties to “see different aspects of a problem” so that they can “constructively explore their differences” and “search for solutions that do beyond their own limited vision of what is possible” (Gray 1989). Organizations engage in collaboration to deal with and respond to an uncertain environment and

increasing competitiveness to increase the chances of acquiring critical resources (Lotia & Hardy 2008).

Studies such as Clarke & Fuller (2010) recognize the need for more research into what they call “deliberate collaborative strategy” and focus specifically on the “formulation and implementation of deliberate collaborative strategic plans” (Clarke & Fuller, p. 85). Yet, there are phenomena of collaborative inter-organizational strategic sensemaking around particular issues between multiple organizations with no primary aim of a strategy and coordination for the group as such and that do not include an immediate decision making situation with often multiple interests and power struggles involved. In the face of metaproblems, organizations respond by collaboratively analysing and understanding the nature of the problems and potential solutions.

In order to explore these phenomena of inter-organizational strategic sensemaking we take a practice perspective (Johnson et al. 2007) on sensemaking (Weick 1995, Maitlis 2005). This theoretical perspective puts an emphasis on the practices that people in organizations draw on in order to make sense of the world (Balogun & Johnson 2004, Rouleau & Balogun 2011, Fenton & Langley 2011). Sensemaking is the process of social construction that occurs when discrepant cues interrupt individuals’ ongoing activity, and involves the development of plausible meanings that rationalize what people are doing (Weick, 1995; Weick et al., 2005). According to Maitlis & Sonenshein (2010) central to the development of plausible meanings is the “bracketing of cues from the environment, and the interpretation of those cues based on salient frames” (Maitlis & Sonenshein 2010, p.551). Sensemaking is thus about “connecting cues and frames to create an account of what is going on” (Maitlis & Sonenshein 2010, p.551).

Sensemaking research is drawing on concepts such as agenda building (Dutton 1997) and the role of power in framing and re-framing of issues (Kaplan 2005) as well as group consensus mechanisms around frames of understanding for collective action (Fiol 1994) in order to explain the process of how individuals, groups or organizations make sense and respond to uncertainty in their environment. We specifically draw on the framing concept which has been conceptualized in previous research as activities of sensemaking (Kaplan 2008) to describe how the meaning of strategic issues, which are ambiguous and contested, is actively made and formed in a social context through processes of social interaction (Dutton & Ashford 1993; Dutton et al. 2001). Frames are guides to interpretation, which are constructed through interaction (Kaplan 2008) and framing is “an active processual phenomenon that implies agency and contention at the level of



reality construction” (Benford & Snow 2000, p. 613). Issue framing (Dutton & Ashford 1993; Dutton et al. 2001) is about identifying critical sets of issues (Benford & Snow 2000) which involve problem identification, assessment and attributions that contribute to participants’ understanding of the problem. Agreement regarding the nature of the problem is necessary for the later assessment of solutions and collective action (Benford & Snow 2000). According to Benford & Snow (2000) we can distinguish between diagnostic framing (assessment of the problem) and prognostic framing (assessment of the solution) (see also Campbell 2005).

Depending on their particular structures different social systems have different capacities to make sense of themselves and their environment. Accordingly, by changing their structures systems can change their sensemaking capacities. Apart from that, there is the possibility for social systems of changing the sensemaking capacity by forming networks with other systems. In the same way as individuals engage with each other to extend their sensemaking capacities, organizations can extend their individual sensemaking capacities by engaging in inter-organizational processes.

According to Weick (2006): *“Groups composed of individuals with distributed-segmented, partial-images of a complex environment can, through interaction, synthetically construct a representation of it that works; one which, in its interactive complexity, outstrips the capacity of any single individual in the network to represent and discriminate events....Out of the interconnections, there emerges a representation of the world that none of those involved individually possessed or could possess”* (Taylor and Van Every 2000, p. 207).

Wright (2006, p. 87) points out the dangers of the limits to the sensemaking capacity: “When a capacity to make sense is challenged by unexpected cues that cannot be located within existing mental models (Hill & Levenhagen 1995), rejection of these can mean that important opportunities or potential threats are missed. If individuals, or groups or organizations become overwhelmed by unforeseen signals or encounters an ability to make sense can collapse, resulting in a loss of meaning and ineffective decision-making.”

In the literature, the process of extending the sensemaking capacity has also been described as “scaffolding” (Clark 1998), i.e. the erection of structures that allow to explore problems beyond the scope of one's own problem solving capacities. Clark (1998) in this sense writes:

“Scaffolding [...] denotes a broad class of physical, cognitive, and social augmentations – augmentations that allow us to achieve some goal that would otherwise be beyond us.” (Clark 1998, p. 163)

Through the construction of “scaffolding structures” (Clark 1998, Lane & Maxfield 2005), organizations confront uncertainty by providing a meta-stable context within which inter-organizational interactions can take place, meanings can be negotiated and strategies can be devised (see Lane & Maxfield, 2005). According to Lane & Maxfield (1997, 2005), examples of scaffolding structures are inter-firm alliances, user organizations, forums, trade associations, fairs and exhibitions, standards setting organizations, etc.

In this research we focus on the scaffolding (i.e. extending) of sensemaking capacities of individual organizations to an inter-organizational process which becomes increasingly important as most organizations do not have the sufficient and necessary internal sensemaking capacity to respond and adapt to the complexities of metaproblems such as environmental resource constraints (Bansal 2003). Water, for example, is a metaproblem (issue of industry-wide significance), as organizations face uncertainties for their operations and hence their long-term strategic planning around water such as access to water, availability of water and quality of water as well as strong interdependencies with food, energy and climate change which all add to the complexity of being able to manage water effectively. Organizations need to collaborate in order to develop new resources such as multiple perspectives and internal (intra-organizational) information processing capacities in order to generate the sort of interpretation necessary of how to respond to such issues as well as concrete procedures that inform and enable their individual strategizing. Sensemaking is a central part to making these problems comprehensible and understandable for organizations. In these cases inter-organizational sensemaking processes extend the capacities of individual organizations to make such problems more comprehensible and ultimately manageable.

## METHODOLOGY

This study uses a longitudinal case study approach to explore the nature of inter-organizational strategizing. We focus on a multi-sector industry project initiated by an international body on sustainability that explores water-related risks (such as operational risks, product risks and financial risks), challenges (such as around water availability, quality and security) and responses (such as knowledge, technology and operational frameworks) for business, covering a period of 6 years (2004 to 2010/ ongoing) through a long-term research engagement. The initiative was attended by 18 multinational companies (MNCs) that made available at least one employee to participate in the inter-organizational meetings and workshops as well as in further work of analysis. We follow the activities of this inter-organizational working group consisting of senior managers and directors/ executives. Besides looking at the inter-organizational level, we also explore the role of the inter-organizational strategizing process for the extension of individual participating organizations' intra-organizational sensemaking capacities. To do so we use a comparative case studies approach in order to identify each organisation's specific activities and practices as well as their commonalities (Yin 1994).

In our empirical study we started with an examination of all 18 companies involved in the inter-organizational process, even if they only participated in parts of the process. However, for pragmatic reasons we then decided to focussed our analysis on 11 companies that participated in the full inter-organizational strategizing process for the embedded case studies. These companies were chosen for two reasons a) access to data such as interviews and internal reports and b) their level of participation and different patterns of interaction (activities/ practices) that emerged throughout the process.

To study these cases, we collected qualitative data from a range of sources, including interviews, real-time observations, field notes as well as workshop reports, minutes of working group meetings and other documents such as presentations and (publicly available) reports. A total of 32 interviews (lasting about an hour on average) have been carried out so far that have been recorded and subsequently transcribed. Interviewees included working group participants of the initiative as well as some of their colleagues that have been drawing on practices (outputs/ aspects) from the inter-organizational strategizing process in their internal strategizing activities.

Our data analysis proceeded in three stages. First, we collated, categorized, coded and chronologically ordered the data set. Then we identified the various activities and practices that constitute the inter-organizational strategic sensemaking process. In the third stage, we identified different process patterns of activities and practices of how certain sensemaking procedures have been transferred and translated to the intra-organizational strategizing and processes of participating organizations as well as how these inter- and intra-organizational processes relate to each other.

## **CASE STUDY PROCESS OVERVIEW: INTER-ORGANIZATIONAL STRATEGIZING INITIATIVE ON WATER**

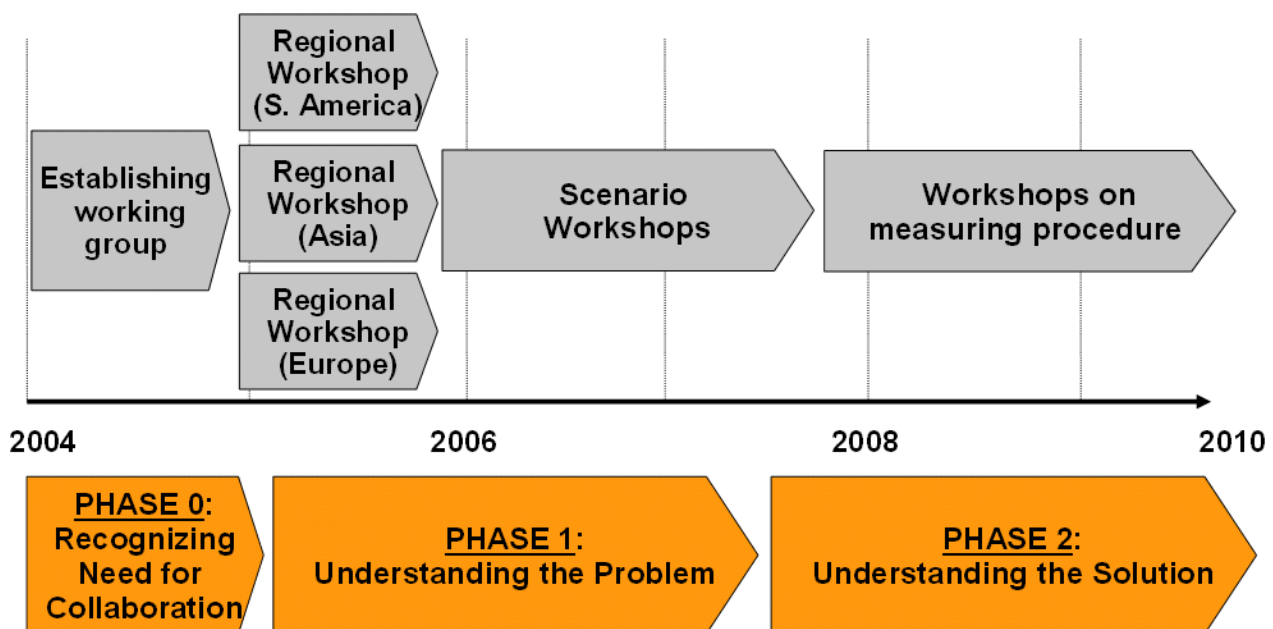
Over the last decade water is increasingly being recognised by organizations as a metaproblem (United Nations Educational, Scientific and Cultural Organization 2012) involving uncertainties and risks concerning the availability of fresh water, conflicts around access to water due to water scarcity, as well as industry-specific issues such as waste water treatment and re-use. As a response to the complexity of water and its many associated issues such as its interdependencies with food, energy and climate change, organizations started to collaborate in the form of joint workshop processes drawing on approaches such as scenario analysis in order to better understand water as a metaproblem as well as to explore appropriate/ potential solutions. In the following we describe the process of inter-organizational sensemaking as it unfolded in this particular case. We have thereby used pseudonyms for the involved companies in order to preserve their anonymity.

### **Phase 0: Recognizing Need for Collaboration**

By 2004 water was increasingly recognized as a problem of industry-wide significance that companies needed to attend and respond to for their business operations. In this context a couple of companies (EnerCo, MiniCo, WatenCo and ConsuCo) that were loosely connected via a multi-sector industry initiative on the broad notion of sustainability got active in setting up a group of companies in order to explore the role of water. These companies recognized that water is a

complex issue of industry-wide significance that can only be addressed through collaboration (see Phase 0 in Figure 1 below) due to a lack of sensemaking ability inside individual organizations. Consequently this initial group of companies tried to mobilize further companies from different sectors in order to be able to understand water issues from different perspectives. In 2004, an inter-organizational working group on water was established with companies sending one company representative to participate in the inter-organizational process. The multi-sector industry initiative on sustainability provided support in terms of coordinating activities, however it was the water working group companies who decided on which kind of activities and topics they wanted to engage in the sensemaking process. A process was developed with the help of a neutral external facilitator with water working group company representatives meeting several times a year in different formats, such as meetings and workshops on specific topics and issues around water.

**Figure 1: Main phases of inter-organizational sensemaking process (2004-2010)**



### **Phase 1: Understanding the Problem**

At the beginning of the inter-organizational water working group's activities (2004), the question for participating organizations was less about whether water was a potential issue but rather how to go about and approach issues around water as well as where to start. The working group companies agreed to start the process by approaching a broad notion of water in order to understand the different problem dimensions and interdependencies of water-related issues (see Phase 1 in Figure 1 above). Part of this broad notion was to start the process through several regional workshops (Europe, South America, Asia) to embrace different local water contexts. Although a couple of organizations (ConsuCo, EngiCo, WatenCo and BanCo) already had established an internal understanding and processes on water and were specifically interested in developing a solution for measuring water, which they needed for their internal sensemaking processes, all companies of the water working group decided to participate and engage in a scenario building process in order to establish an initial collective understanding. As a result, three different scenarios were developed in a series of workshops (2005/2006) which highlighted three sets of issues around water efficiency, water security and interconnectivity. The main insight was around that water was mainly a measuring problem – in order to manage water effectively companies need to know and therefore measure their individual water footprint (defined as the total volume of water used directly or indirectly to produce and consume goods and services) in order to understand how exposed they are and where they need to respond to water-related issues. Part of this phase included the capturing of regional issues. During the process of building the scenarios, a core team with representatives from four working group companies (EnerCo, MiniCo, WatenCo and ConsuCo) was established to support and coordinate the process and act as a consistent element in developing and taking forward the collective understanding and knowledge (content) in the workshop process. Especially ChemanCo, UtiliCo and MultiCo did not have internal processes for exploring water issues and were using the insights from the scenarios for building initial internal awareness on water. Other companies (EnerCo, EnCo, ConCo, MiniCo) were already further ahead in exploring water issues and could already relate insights to their respective sensemaking activities throughout the inter-organizational process.

## **Phase 2: Understanding the Solution**

As one of the main follow-up activities from the initial exploration of water from the scenarios, the water working group developed a procedure of how to measure water (2007) in order to be able to monitor their organizations' respective water footprints (see Phase 2 in Figure 1 above). The procedure was introduced and used internally by the respective participating companies for assessing their individual water issues with regards to regions, production sites (e.g. operations, processes, supply-chains etc.). Specifically ConsuCo, EngiCo, WatenCo and BanCo were directly introducing the procedure into their internal sensemaking processes that directly fed into their reporting and strategy-making. Information and data about specific water stressed areas (and other ways of dealing with issues around water) was shared among the working group companies mainly through case studies on specific regions or operations in workshops and the regular working group meetings (2007-2011).

The group is currently (2011) in the process of looking further into cross-sector business solutions and (technological) innovation on other water issues and responses.

## **DIFERENT ACTIVITIES AND PRACTICES OF EXTENDING SENSEMAKING CAPACITIES**

From our analysis we could identify several activities and practices specific for inter-organizational sensemaking, both on the inter-organizational process as well as within participating organizations. These practices can be grouped into three categories: scaffolding practices, conduct practices and transfer practices. These three categories describe the activities that organizations (the group of organizations) were drawing on in order to extend their individual sensemaking capacities.

The scaffolding practices included coalition mobilizing; the setting up of new inter-organizational scaffolding structures (capacities for sensemaking); and the specifying of the issue scope; the conduct practices included diagnostic and prognostic sensemaking in terms of how problem and solution spaces were framed as well as the development of a potential solution procedure; the transfer & translation practices included the re-contextualising to intra-organizational context; and the structural anchoring within intra-organizational processes to extend sensemaking capacity.

Table 1 gives an overview on the practices that enabled the extension of sensemaking capacities through inter-organizational scaffolding as well as the interplay with (re-contextualizing to) intra-organizational sensemaking in participating organizations.

**Table 1: Categories of inter-organizational sensemaking practices**

<b>Categories of Practices</b>	
<b>Scaffolding practices</b>	
<b>Coalition mobilizing</b>	<ul style="list-style-type: none"> <li>* Creating sense of urgency</li> <li>* Pointing out limits of individual sensemaking capacity</li> <li>* Emphasizing need for collaboration</li> <li>* Defining diversity of perspectives to be represented</li> </ul>
<b>Setting up &amp; maintaining inter-organizational scaffolding structures</b>	<ul style="list-style-type: none"> <li>* Appointing company representatives as participants in inter-organizational process</li> <li>* Organising workshops and meetings</li> <li>* Establishing core team for coordination across activities</li> </ul>
<b>Specifying an inter-organizational issue scope</b>	<ul style="list-style-type: none"> <li>* Communicating need for broad understanding</li> <li>* Negotiating abstract definition of transversal issue</li> <li>* Preventing sector-specific definitions</li> </ul>
<b>Conduct practices</b>	
<b>Diagnostic sensemaking: Framing of problem</b>	<ul style="list-style-type: none"> <li>* Exploring regional and sector-specific experiences</li> <li>* Consensus-building on key characteristics of problem</li> <li>* Assessment of problem space</li> <li>* Identification of key issues</li> </ul>
<b>Prognostic sensemaking: Framing of solution</b>	<ul style="list-style-type: none"> <li>* Consensus-building on definition of solution space</li> <li>* Developing of procedure for dealing with problem</li> </ul>
<b>Transfer &amp; translation practices</b>	
<b>Re-contextualising to intra-organizational context</b>	<ul style="list-style-type: none"> <li>* Translation of insights into organization-specific context</li> <li>* Integration of insights into existing structures</li> </ul>
<b>Structural anchoring within intra-organizational processes</b>	<ul style="list-style-type: none"> <li>* Mobilization of intra-organizational support</li> <li>* Establishment of support structures &amp; securing of resources for accommodating of insights of inter-organizational sensemaking</li> <li>* Creating space for communicating insights from inter-organizational process</li> </ul>



In the following, these three categories of extension practices that enable the extension of sensemaking capacities, the actual process of inter-organizational sensemaking and the transfer & translation of insights via the respective participating organizations back into their internal sensemaking processes shall be further theoretically outlined and illustrated with exemplary accounts from the interviews with the involved actors (please see Table 3 in the Appendix for further exemplary accounts from interviews).

### **Scaffolding practices**

#### ***Coalition mobilizing***

In order to set up the project, a proposal was put forward by four organizations (EnerCo, MiniCo, WatenCo and ConsuCo) in order to mobilize a critical number of member organizations that were willing to dedicate resources and a representative to the activities of a water working group. Throughout the process, organizations that were dedicated that a certain activity should be the next step in the process, tried to convince, mobilize and steer other organizations (via their representatives) that a certain topic should be addressed. These activities occurred before each of the main strategic sensemaking phases of the process (diagnostic sensemaking, prognostic sensemaking, developing of procedure). Tensions of interest arose over the need to establish a collective understanding of the problem as a first step from which the group could explore potential solutions versus developing a procedure right away.

*“And I think [Manager WatenCo] presented the scenario, the proposal, and there was some scepticism about it. [...] And we [...] spent a fair amount of effort talking to different working group members and further developing the proposal, adapting it with input from others. So I guess you could call it a process of getting buy-in by consulting with other working group members. [...] when people saw the project as it had developed they were very keen to get on board.” (Project Manager, Industry Initiative)*

This practice can be described as coalition mobilizing for inter-organizational sensemaking which is similar to findings from research on social movements and agenda building. Zald & Berger (1978) describe activities and processes in which groups in organizations try to affect priorities, policies, and actions in order to acquire resources and mobilize people as 'resource mobilization'. In her research on strategic agenda building, Dutton (1997) describes agenda building that focuses on the collective and coordinated processes of a group of individuals designed to claim the attention of top management as 'coalition mobilizing'.

### ***Setting up & maintaining inter-organizational scaffolding structures***

In order to run the inter-organizational sensemaking process different structures needed to be established. As a first steps a group of representatives from organizations formed around a core group of dedicated companies. Further, regular inter-organizational working group meetings and workshops which were documented in minutes and reports provided the infrastructure for interactions. A core group of companies was formed in order to provide consistency throughout the process. Additional administrative and management support came from a manager of the industry initiative itself as well as a neutral external facilitator for structuring and moderating the process. Choosing and selecting the 'breadth' of participants representing different industry sectors was important to make sure a range of 'transversal issues' as well as different perspectives were introduced to and represented in the process in order to better understand the issues around water.

*“You need a committed core team that is aware of everything [...] to be showing up to pull the critical stages, and enough consistency in the support department, the teamwork behind the scenes to make it happen, the [industry initiative], the report writing. So to have the momentum, to keep going even through difficult moments and not really just question it all and want to start again.” (Vice president, ConsuCo)*

According to Clark (1998) and Lane & Maxfield (1997) scaffolding structures augment (extend) problem-solving capacity and can be physical, cognitive or social. Hence, in order to enable inter-organizational sensemaking processes, a scaffolding structure needed to be established within which the inter-organizational interactions can take place, meanings can be negotiated and strategies can be devised (Lane and Maxfield, 2005).

### ***Specifying an inter-organizational issue scope***

During the early phase of the inter-organizational process, it became apparent that due to the broad notion of water and its many associated issues, such as climate change, food, energy, there was a need for participants in the scenarios to get a broad understanding on the sets of issues that would potentially be important for their organizations. Hence, the kinds of issues in the process needed to be framed to exhibit a “transversal” nature and thus being of relevance and affecting all of the participating organizations rather than issues that would only have a sector- or regional-specific relevance. The inter-organizational sensemaking process was only possible when

participants agreed and framed a transversal issue scope which is of inter-organizational relevance. Due to the transversal nature of issues the process was aiming to approach, organizations (representatives) from different kinds of sectors got interested in participating in the process.

*“[...] you have to understand how it fits together and also what scale of conversation you're having about water and what is the situation that you're in with the other people, what is their understanding of water, so that you pitch the conversation at a level that makes progress of the issue that you're confronting.” (Vice president, ConsuCo)*

This corresponds to findings by Fiol (1994) that consensus on the framing of issues is necessary for group action. According to Fiol (1994), convergence around a broad frame of interpretations provides the common understanding to move towards collective action.

### **Conduct practices**

#### ***Diagnostic sensemaking: Framing of problem***

After consensus on the actual issue scope was reached, the scale of conversation within which the actual sensemaking in order to understanding the problem could take place, was set. Through the exploration of potential future developments in the scenario building process, the assessment and analysis of water as a metaproblem lead to identifying critical sets of issues such as the high interdependencies of water with other issues like energy, climate change and food as well as issues around access, availability and quality of water. These identified sets of critical issues contributed to the understanding of participants about the complexities, interdependencies and unclear boundaries of water as a metaproblem (Hardy et al. 2006) that exceed the scope of single organizations to effectively respond (Westley & Vredenburg 1991). As a result the group identified the 'need to measure water' as the main problem in order to be able for organizations to understand their individual risks and exposure to local water situations and its related issues. Unless organizations do not measure and thereby know about their specific water footprint, they won't be able to manage water effectively.

*“I think that the scenarios clearly helped people to understand the interdependence between what I call the absolute fundamentals, water, energy, atmosphere, nutrients, and waste. [...] the connection between energy and waste, or energy and nutrition, or nutrition and atmosphere, but they're all there, and the most significant ones at the moment I think are water, energy, climate,*

*and food. And people are now talking about all of those in a much more integrated way than they were before.” (Senior manager, WatenCo)*

This phase was characterised by sensemaking activities through which an understanding about the actual problem emerged. Sensemaking has been conceptualized in recent research as a framing process (Kaplan 2008) in which the meaning of strategic issues is actively made and formed in a social context through processes of social interaction (Dutton & Ashford 1993; Dutton et al. 2001). Issue framing (Dutton & Ashford 1993; Dutton et al. 2001) is about identifying critical sets of issues and 'diagnostic framing' (Benford & Snow 2000) which involve problem identification, assessment and attributions that contribute to participants' understanding of the problem. This agreement regarding the nature of the problem – in our context water as a metaproblem – is necessary for the later assessment of solutions (prognostic framing) and collective action (Benford & Snow 2000).

### ***Prognostic sensemaking: Framing of solution***

The collective understanding on water as a metaproblem and the need to measure developed in the diagnostic sensemaking phase lead to the group moving towards exploring potential solutions. Consensus on water being a metaproblem and the need for further collaboration to better understand local context-specific water situations, lead to the plan that in order to manage water effectively organizations have to (start) measuring their specific water footprint. This understanding resulted in the development of a concrete solution – that is a particular measurement procedure of dealing with the problem. This measurement procedure was compatible across companies and sectors and therefore a central practice of extending the sensemaking capacity of individual participating organizations.

*“One [follow-up from the scenario workshops] was the [measurement procedure]. Because [...] if you do not have facts on the table, if you do not understand your risk profiles then you cannot really benefit from the scenario work [...] many companies do not know how exposed they are. So that's why this tool has been developed as the next step. I mean the scenarios are very very strategic. Then the tools, that's very practical. In order to generate facts, to better move forward with the scenarios again. The scenarios that is basically an invitation to a thought process within the company. While the tool is about generating facts you know.” (Manager, MiniCo)*

*“So lots of what I would say would be joined up thinking. To emerge from companies. I think that all comes from, I think, the ability or the realisation that working together you can do a lot more than trying to solve it by yourself.” (Manager, UtiliCo)*

This assessment of the solution space resonates with the concept of 'prognostic framing' (Benford & Snow 2000) which involves the articulation of a solution and the strategies for carrying out a plan for addressing the problem. Whereas diagnostic frames shape the understanding of what the problem is, prognostic frames guide views of the solution (Kaplan 2008).

### **Transfer & translation practices**

#### ***Re-contextualizing to intra-organizational context***

Outcomes of the inter-organizational process were used internally in participating organizations to build sensemaking capacities around water-related issues as well as to introduce new practices and structures. As has been described above, the solution to the measuring problem (diagnostic frame) was to develop collectively a measuring procedure which each organization can use individually in order to assess their respective water footprint. Organizations recognized that in order to manage water effectively they had to start by understanding where they were facing water issues and risks and how exposed they are for example in certain regions or operations. Hence a crucial aspect in extending the sensemaking capacities of individual participating organizations was in transferring the scenarios (Phase 1: Exploring/ Understanding the Problem) and then later the measurement procedure (Phase 2: Exploring/ Understanding the Solution) in order for organization to make sense and understand individually their specific local water context. Thus the inter-organizational process directly informed the internal strategic sensemaking processes. Report backs and briefings on outcomes of the inter-organizational process were done by participating individuals into their own respective organizations through workshops that were supported by the materials from the inter-organizational sensemaking process such as the scenarios and the measurement procedure. These insights, materials and procedures were applied and translated to the local context of the organizations and enabled them to assess and understand their individual water-related issues. This also included the participation of representatives from other participating organizations which could contribute by providing their specific industry perspective thus legitimating the insights and measurement procedure.

*“What we did do is generate the empirical questions, which we said, this scenario triggers this type of questions and it is for you to ask in your own company. [...] so the questions that were asked are the right questions and that triggered the change in people.” (Senior manager, EnerCo)*

*“[...] it was important in [...] internal point of view, meaning using this information as part of making the case for the 'why do we need to develop capabilities in the area of water?' [...] So having [...] a consistent [...] theme both externally and internally, it has reinforced [...] this understanding. And then which led ultimately to the mandate for us to invest in this area.” (Manager, EnCo)*

Organizations draw on external scaffolding structures – as in our case the different workshops, documents and administrative support that enable the inter-organizational process – in order to extend their sensemaking capacities. Hence, the sensemaking insights such as the understanding of the problem (diagnostic frame) that you need to measure water from the scenarios as well as the understanding of the solution (prognostic frame) and developing a procedure/ practice of how to measure water from the inter-organizational process had to be “re-contextualized” or “re-embedded” (Czarniawska & Joerges 1996, p. 23f.) to the respective intra-organizational sensemaking processes. This translating (transforming) (Carlile 2004, Morris & Lancaster 2006) into “local practices” (Campbell 2004, Czarniawska & Joerges 1996) is crucial for organizations to benefit from the external scaffolding structures and marks the actual extension in terms of augmenting existing sensemaking capacity existing of practices and procedures. Translation hereby denotes the process by which practices, such as in this research 'sensemaking procedures', “are modified and implemented by adopters in different ways so that they will blend into and fit the local social and institutional context” (Campbell 2005, p. 55). “[...] translation involves the combination of new externally given elements received through diffusion as well as old locally given ones inherited from the past...” (Campbell 2005, p. 55)]

### ***Structural anchoring within intra-organizational processes***

In order to benefit from the inter-organizational process and the transfer and re-contextualizing of sensemaking practices and procedures, the respective organizations needed to set up new structures in order to enable and integrate these new insights and practices. The setting up of new internal sensemaking structures and practices ultimately extended the existing sensemaking capacity of individual participating organizations. Especially around the measurement procedure, companies started to build new structures and processes – such as establishing new positions and working groups which are specifically dealing with water in the individual organizations as well as introducing new responsibilities such as new dimensions that needed to be assessed and reported on that are specific to operational sites, new project developments as well as standard

operating procedures – that extended their respective sensemaking capacity on water. Operational guidelines were produced to sensitize managers with respect to water-related issues. Drawing on such artefacts enabled organizations to establish, inform and sustain an ongoing internal sensemaking process on water beyond the scaffolding to/from the respective phases of the inter-organizational process. The individuals who participated in the inter-organizational process often acted as 'structural anchoring points' as they have been the first means by the participating organizations to establish positions internally that (start to) engage/ understand water and its potential implications for the organization.

*“Presentations [of the scenarios] were the early stage. Eventually, it became part of the measurement criteria for excellence in every business group, in every plant. It became a question that you had to answer in the management of a [MiniCo] plant, whether it was in [region x] or whether it was in [region y] or whether it was in...wherever. It was an indicator. The issue around water.” (Vice president, MiniCo)*

*“We shared [...] the [scenario] report around in the company and we used it since. Since then we now have a Water Council in [ConCo] [...] and that group is looking at [ConCo]’s water strategy, global water strategy. And so the scenarios helped being useful almost like sort of background for that work. OK, so given that possible scenarios what strategy does [ConCo] want to take in terms of managing our water opportunity.” (Vice president, ConCo)*

## **DIFFERENT SCAFFOLDING PHASES AND PATTERNS OF ACTIVITIES IN INTER-ORGANIZATIONAL SENSEMAKING (2004 to 2010/ ongoing)**

As became evident from the empirical case, organizations engaged in different ways with the inter-organizational sensemaking process. We have identified three process patterns of how and when organizations scaffold in order to extend their internal strategic sensemaking capacity by drawing on an inter-organizational process as well as the interplay between inter- and intra-organizational strategizing processes (see Table 2). These process patterns exhibit different ways of how activities and practices were being used by participants (participating organizations) in the process.

In particular, we identified three patterns of inter-organizational scaffolding: (I) A pattern of sequential sensemaking where the inter-organizational process was 'triggering' the internal strategic sensemaking process; (II) A pattern of parallel sensemaking or 'complementing' where inter- and intra-organizational strategic sensemaking processes run in parallel with ongoing cross-fertilization; And (III) a pattern of selective sensemaking and thereby 'selective extension' where companies were transferring certain issues onto the inter-organizational process in order to develop understanding that would address the specific issue and got increasingly involved once these issues got taken up.

Table 2 provides an overview on companies' extension patterns in relating to the inter-organizational process.



**Table 2: Overview of case companies**

Company	Sector	Brief case description	Role in inter-organizational process	Extension pattern
<b>ChemanCo</b>	Chemical Industries	ChemanCo got sensitized for water related risks through emerging internal challenges with water supply as well as peer activities (Phase 0) which made them aware that water will be of an issue to them as well at some point. Engagements were specifically around the scenarios as a means for communicating and engaging management and employees to be more aware of water-related issues. They started to look into how to use the metrication procedure for internal operations although no specific internal capacity was established as an immediate follow-up to the inter-organizational process.	<ul style="list-style-type: none"> <li>* Part of (extended) working group core team</li> <li>* Specifically coalition mobilizing around scenarios as saw this as an opportunity to learn more about water issues</li> </ul>	<b>Triggering (Sequential Sensemaking)</b>
<b>UtiliCo</b>	Utilities/ infrastructure sector (multi industries)	UtiliCo started to see issues around water supply in their immediate supply and client environment. They used the Scenarios (Phase 1) for internal sensitizing and awareness building around water-related issues. After Phase 2 UtiliCo established an internal pilot on the 'metrication procedure' which was later used to assess UtiliCo's operations' water footprint and became the basis for their strategic management of water risks.	<ul style="list-style-type: none"> <li>* Entered late in process Phase 1</li> <li>* Became part of (extended) working group</li> </ul>	
<b>MultiCo</b>	Construction & Retail	MultiCo has been exposed to issues around water shortages and access due to its geographical location of their operations. Yet no internal capacity around water had been established. MultiCo used the Scenarios for internal awareness building in their operations and subsequently first applied the 'metrication procedure' to all its its operations and development projects and later integrated it into their environmental due diligence processes.	<ul style="list-style-type: none"> <li>* Became part of (extended) working group core team</li> <li>* Coalition mobilizing for measuring procedure</li> </ul>	
<b>EnerCo</b>	Extractive Industries Sector	EnerCo had already started to act on water, yet water was not high on the strategic agenda and only minor internal capacities had been established. EnerCo had been sensitized for water issues due to access to water	* Initiator of water	

**Table 2: Overview of case companies**

	(Energy)	constraints at some operations and they are further exposed to water risks due to its global operations and stakeholders. They were aware of the fact that they needed to establish a better understanding of the actual problem and associated issues and used the scenarios to build capacities in parallel to the inter-organizational process. EnerCo established an internal pilot on the 'metrication procedure' during Phase 2 and introduced it to its internal process.	working group  * Part of working group core team * Core expertise/ lead Scenario building * Coalition mobilizing for Scenario and metrication procedure	<b>Complementing (Parallel Sensemaking)</b>
<b>EnCo</b>	Extractive Industries Sector (Energy)	Due to its sector-specific exposure to water related risks, EnCo was dealing with water as a strategic issue although with no substantial understanding on the nature of the problem or approaches of how to deal with it effectively. EnCo used the scenarios to further raise awareness inside the company and later established an internal pilot on the 'metrication procedure'. EnCo continuously engaged around the outcomes of the inter-organizational process internally which enabled them to build internal sensemaking capacity and new structures that allowed them to sustain their efforts around water.	* Became part of (extended) working group * Coalition mobilizing for Scenario and metrication procedure	
<b>ConCo</b>	Utilities company	Due to their already existing internal awareness and expertise, ConCo was able to integrate the outcomes of the inter-organizational process right away into their internal processes and enabled their strategy process and activities on water. ConCo used the scenarios as a central framework to develop their internal water strategy and established internal pilot on the 'metrication procedure' and assessed all its operations.	* Part of working group core team	

**Table 2: Overview of case companies**

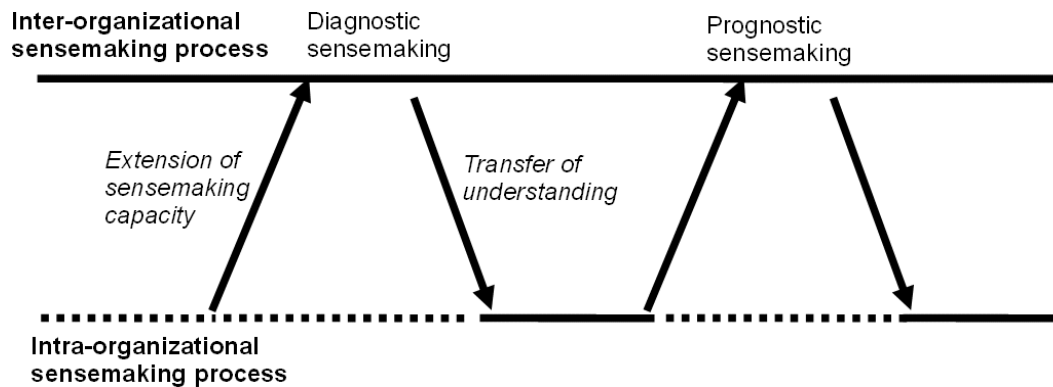
<b>MiniCo</b>	Extractive Industries Sector (Mining)	MiniCo was exposed to water as a strategic issue and was starting internally to better understand the problem of water. The scenarios were used to test MiniCo's internal strategic assumptions. MiniCo established an internal pilot on the 'metrication procedure' and assessed all its operations;	<ul style="list-style-type: none"> <li>* Initiator of water working group</li> <li>* Part of working group core team</li> <li>* Coalition mobilizing for scenarios and measuring procedure.</li> </ul>	<b>Selective extension (Selective Sensemaking)</b>
<b>ConsuCo</b>	Utilities sector	As a company from the utilities sector, water plays a central role to the business of ConsuCo and they had already explored the issue of water and had identified the problem as a 'measurement problem'. Hence ConsuCo had clearly identified the need for measuring as the key challenge/ problem (diagnostic frame) but due to a lack of capacity were not able to develop a robust way of how to measure their water footprint internally (Phase 2: Exploration of Solution). ConsuCo could establish an internal pilot on the 'metrication procedure' which directly linked to their already existing programme.	<ul style="list-style-type: none"> <li>* Initiator of water working group</li> <li>* Part of working group core team</li> <li>* Initial coalition mobilizing for addressing measuring problem (diagnostic frame) from the beginning of the working group process;</li> </ul>	
<b>EngiCo</b>	Engineering and Construction Sector	EngiCo is addressing water and measuring procedures in their daily business with clients. They used the scenarios for further awareness building internally as well as with their supply-chain and clients. Due to their existing expertise and capacity on water, EngiCo used the collective effort of the inter-organizational process to lead the development of the measuring procedure. The scenarios (Phase 1/ Exploration of problem) could hereby directly inform the areas of relevance that the measuring	<ul style="list-style-type: none"> <li>* Part of (extended) working group core team</li> <li>* Core expertise/ lead metrication procedure</li> <li>* Coalition mobilizing on metrication procedure</li> </ul>	

**Table 2: Overview of case companies**

		procedure has to address.		
<b>WatenCo</b>	Energy infrastructure sector	Although in the water and energy infrastructure business, WatEnco drew on the inter-organizational process to inform their internal strategic processes. The metrication procedure was translated and used for their internal operations.	<ul style="list-style-type: none"> <li>* Initiator</li> <li>* Part of working group core team</li> <li>* Coalition mobilizing for metrication procedure</li> </ul>	
<b>BanCo</b>	Financial Industries Sector	BanCo was highly sensitized to water as an issue and specialised early on as a leading actor in their industry. Due to their high level of expertise they were from the beginning formulating the need for a 'measurement procedure'. As the group decided to start the inter-organizational process (Phase 1) with establishing a collective understanding through scenarios first (Phase 1/ Exploration of the Problem), BanCo only selectively drew on aspects that were relevant to them. In Phase 2 (Exploration of Solution) they were involved in developing the metrication procedure but did not implement it as they perceived it to be not tailored enough for their sector.	<ul style="list-style-type: none"> <li>* Initiator</li> <li>* Part of (extended) working group core team</li> <li>* Initial coalition mobilizing on metrication procedure</li> </ul>	

The three different process patterns of how individual companies were extending their internal strategic sensemaking capacities and practices to the inter-organizational process shall be exemplified in the following.

***Process pattern – Type I: Triggering (sequential sensemaking)***



Companies ChemanCo, UtiliCo and MultiCo had a low (or constrained) initial internal sensemaking capacity (on water) at the beginning of the initiative (2005) and were triggering their internal initial sensemaking processes on water through re-contextualizing and translating the understanding after the diagnostic sensemaking phase as well as the procedure after the prognostic sensemaking phase from the inter-organizational process. Through drawing on the external scaffolding structures, these organizations were relating their internal sensemaking processes directly to inter-organizational sensemaking practices such as the sensemaking procedure as outcome from the prognostic sensemaking. The measurement procedure, as being an objectified artefact from the inter-organizational sensemaking process, supported and actually enabled such companies to establish and sustain initial internal sensemaking capacities by

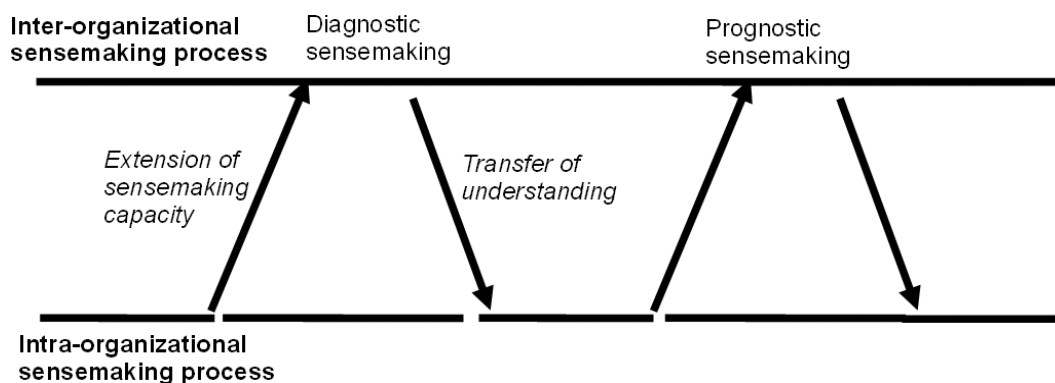
implementing new structures and practices (“sensemaking structures and practices”) throughout the overall process (2005-2010).

*“It wasn’t a strategic area for us but basically we identified at that time that clearly there was some new dynamics going on. [...] We didn’t understand really what was going on, and so we felt this was a good way to get a nice overview if you like [...] I think we were starting to see the water aspect as being more strategic now [after the scenarios] to us than it was before.” [Senior manager, CheManCo]*

*“[...] it was about the same time [2005] [...] that we were starting to see issues with water supply and having to change some of our processes to sort of to try and match the new reality. So, I mean the timing was very good for the scenarios and it’s not a big surprise that if other companies are having challenges, that we’re going to have challenges as well.” [Senior manager, CheManCo]*

*“[...] I actually remember quite a lot about the workshop [...] They brought a lot of new knowledge [...] about water and water supply and all the work [...] on all the footprint. I mean that was extremely interesting and obviously lead to [...] work that we did in looking at analysing different plants [...] production colleagues needed to start measure some of these things which obviously they weren’t measuring before.” (Manager, UtiliCo)*

### ***Process pattern – Type II: Complementing (parallel sensemaking)***

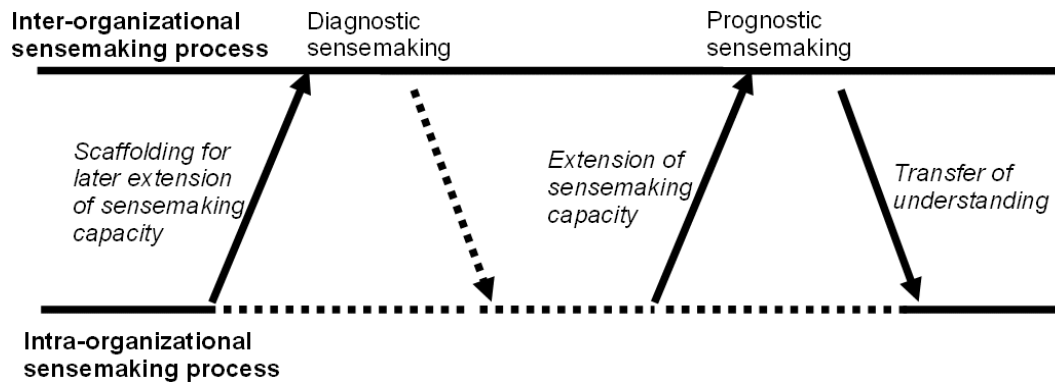


Companies EnerCo, EnCo, ConCo and MiniCo were depicting characteristics of this process pattern, that is they already had established (initial) internal sensemaking capacities at the beginning of the initiative (2005), although water was still not yet recognized as a pressing strategic issue, and were therefore able to re-contextualize sensemaking insights and procedures continuously into their internal strategic sensemaking process. Due to their initial sensemaking capacities, they were seeing the relevance and opportunities of the initiative very clearly from the beginning and got actively involved in coalition mobilizing at each of the sensemaking phases. These companies were able to build on and further extend their existing initial sensemaking capacities in parallel to the inter-organizational process and thereby complement their internal strategic sensemaking process through an ongoing cross-fertilization. Also, these companies were using the external scaffolding to transfer already identified issues to the inter-organizational process.

*“It [scenario workshops] reinforced basically what I would say you know, that this is a global issue for our businesses and you know, that kind of really led to, you know, the – I call it the investment we made as a company in establishing a centre for water sustainability [...] basically all of these, you know, I mean the study which was done specifically around our facilities and the scenarios [...] were key to really enabling the next phase which was meaning action and investing dollars to really address these issues proactively for our business.” (Manager, EnCo)*

*“the result of all of that was that we had an awareness of water, but we have realised that even our commitment was not strong enough. So this really became a corporate programme starting with reporting and then checking out if we have possibilities, for example, to save water in our operations.” (Senior Manager, MiniCo)*

***Process pattern – Type III: Selective extension (selective sensemaking)***



The companies ConsuCo, EngiCo, WatenCo and BanCo already had established profound internal sensemaking capacities on water at the beginning of the initiative (2005) and were further ahead in thinking about and addressing water related issues than the other participating organizations. Water was already recognized as a pressing issue for different aspects of their operations and products. They already identified a constraint in their internal sensemaking capacity to individually develop a procedure that would inform their internal strategic sensemaking on water and therefore saw an opportunity to transfer/scaffold these very specific issues around the developing of a concrete sensemaking procedure to the inter-organizational sensemaking process. Although they anticipated that such procedures would follow from prognostic sensemaking activities, these companies recognized that all participating organizations would first need a collective understanding on the metaproblem before moving on to concrete solutions. Yet, they participated in the diagnostic sensemaking phase without really needing and using the understanding internally but rather recognized the diagnostic phase as a vehicle to raise the level of awareness and understanding in the inter-organizational group specifically on the issue of how to measure and monitor water in order to be able to manage water effectively. These companies got involved in coalition mobilizing for each of the sensemaking phases being explicit about their need of not being able to develop such procedures on their own and therefore drawing



on the inter-organizational process. By doing so, these companies scaffolded the development of a sensemaking procedure to the inter-organizational process which they weren't able to develop internally. The procedure became a key practice that enabled these companies to further address water related issues internally and also became an integral part of their internal sensemaking and strategizing activities on water.

*“I would just have to say that we were already up the learning curve on all these things so far that wouldn't have been necessary. At the end of the day, actually the scenarios were not a lot of new information for us [...]” (Vice president, EngiCo)*

*“We decided that we would like an environment strategy, we decided that the most sensible thing would be to measure our impact [...] so one of the big challenges we had was trying to set a sensible way of putting a measurement system in place and also what would that water strategy be. [...] We now use [the tool] to actually map where our production sites are and their index according to water stress, and that has allowed us to make a much more targeted water strategy.” (Director, ConsuCo)*

*“[...] the [measurement procedure] has been very useful [...] because we used to report water usage just as if volumes of water were the same everywhere but we have now used the [measurement procedure] to actually map where our production sites are and their index according to water stress, and that has allowed us to make a much more targeted water strategy, obviously giving priority to high water usage and water strategy.” (Director, ConsuCo)*

## **DISCUSSION AND CONCLUSION**

The aim of this article was to explore the question of how organizations extend their sensemaking capacities through inter-organizational strategic sensemaking processes. In order to explore the role of inter-organizational processes for extension of sensemaking capacities we were taking a practice perspective (Johnson et al. 2007) on sensemaking (Weick 1995, Maitlis 2005).

We were particularly interested in inter-organizational strategic sensemaking processes on so-called metaproblems (Hardy et al. 2006, Selsky & Parker 2005), which are characterized by high complexity, uncertainty and unclear boundaries, and exceed the scope of individual organizations to make sense of. In our analysis we examined an inter-organizational strategic sensemaking process on the metaproblem of water. It became obvious that the purpose of the collaboration was less about developing a collective way forward for the group of involved companies but rather about informing and extending the sensemaking process of the individual participating organizations.

Our findings show that individual organizations are extending their sensemaking capacities to an inter-organizational process by drawing on different extension practices – scaffolding practices, conduct practices and transfer practices. As became evident from our empirical case, organizations engage in different ways with the inter-organizational sensemaking process. We have identified three process patterns of how and when organizations extend their internal strategic sensemaking capacity. These process patterns exhibit different ways of how activities and practices were being used by participating organizations in the process.

(I) Triggering (sequential sensemaking): a pattern where the inter-organizational process was triggering the internal strategic sensemaking process;

(II) Complementing (parallel sensemaking): a pattern where inter- and intra-organizational strategic sensemaking processes run in parallel with ongoing cross-fertilization;

(III) Selective extension (selective sensemaking): a pattern where companies were transferring certain issues onto the inter-organizational process in order to develop understanding that would address the specific issue and got increasingly involved once these issues got taken up.

With these findings we contribute to three literatures. First we contribute to research on strategic sensemaking (Balogun & Johnson 2004, Rouleau & Balogun 2011, Fenton & Langley 2011). We show how strategizing takes place beyond the organizational boundaries of individual organizations. We introduced the concept of scaffolding (Clark 1997, Lane & Maxfield 2005) to show how organizations extend their sensemaking capacities by drawing on specific practices in order to establish inter-organizational sensemaking processes as well as re-contextualising insights back into their respective sensemaking processes. By taking a practice perspective we identified scaffolding and inter-organizational sensemaking practices that constitute these processes. Further, our analysis showed different process patterns in terms of how organizations scaffold differently to the inter-organizational process, thereby extending their internal sensemaking capacity.

Second, we contribute to the literature on collaborative strategy-making (Hardy et al. 2006, Gray 1989) by looking into inter-organizational processes that do not aim for a collective way forward but which are of specific relevance for the internal processes of participating organizations.

Finally, we extend with this study the literature on scaffolding (Clark 1997, Lane & Maxfield 2005, Orlikowski 2006) by revealing how scaffolding occurs on the inter-organizational level as well as identifying concrete patterns of how inter-organizational scaffolding processes unfold. Studies on scaffolding have so far concentrated on the individual or groups inside organizations.

We argue that in the wake of progressive globalisation and accelerating speed of change, it will become increasingly common for corporations to draw on inter-organizational strategic sensemaking processes for scaffolding their intra-organizational sensemaking capacity in order to be able to respond to complexities and interdependencies of metaproblems associated with climate change, financial or energy crises.

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## APPENDIX

**Table 3: Inter-organizational scaffolding practices and examples**

Group of Practices	Exemplary accounts/ Evidence of practice
<b>Extension practices</b>	
Coalition mobilizing	<p><i>“Part of the selling argument for [the] project [...] was the recognition that companies needed to look beyond the fence line. They can't, in thinking about water, [...] just limit themselves to what their meters in the factories say [...]. they need to be addressing water issues in collaboration, in consultation with other stakeholders.” (Senior Manager, WatenCo)</i></p> <p><i>“So the first thing was actually to convince the members of the water group, [...] that it was a good thing to run the scenario project, how we should go about it [...]” (Manager, WatenCo)</i></p> <p><i>“And this [report] actually was the first time when businesses from different sectors talked about water and what does it mean to each other. And is it worthwhile to proceed on the project called 'Water' [...] together across sectors.” (Senior Manager, MiniCo)</i></p> <p><i>“[...] there were some companies that felt like they had already thought these things through sufficiently and that they didn't need to do a scenario process, you know, which was one of the reasons for moving on with the [measurement procedure], for example, which supposes, you know, to make the effort to use the [measurement procedure], you have to be already convinced that water is a sufficiently important issue for your company.” (Project Manager, Industry Initiative)</i></p> <p><i>[Issue scoping?] “So some people [...] would have liked to have seen us start on something like a [measurement procedure] instead of doing the scenarios project. They were ready for that earlier. [...] So [...] even in 2004, there were a lot of companies that already felt like water is an important issue that's only going to grow for us and what we need to be concentrating on now are appropriate metrics for that, how we measure risk exposure, etc [...]” (Project Manager, Industry Initiative)</i></p>
Setting up & maintaining inter-organizational	<p><i>“I thought that it was more important to have a representative from each sector rather than the sector that had people who wanted to take part being allowed with too many people. Because you actually want a</i></p>

scaffolding structures	<p><i>variety of perspectives across sectors is far bigger than the variety of perspectives within a sector if you're missing another sector.” (Vice president, ConsuCo)</i></p> <p><i>“Well, one of the things that became clear fairly early on was that we – I mean, I felt this strongly as Director of the water programme and basically responsible for managing the scenario project as part of that job – I felt the need for a sort of executive committee or a management committee. [...] We had a core group of companies. [...] And they, they did put in a higher level of effort than others. And [...] I had sort of a management committee to help me with decisions about the overall process.” (Project manager, industry initiative)</i></p> <p><i>“[...] the role-out which we did and the communication around this really I would say triggered, well how do I say this, it made us a really credible partner in the whole water debate. People really saw us, the [industry initiative], the business community, trying to make a positive contribution to the whole water debate and finding solutions etc. It helped get us entry into spaces where otherwise it would have been a little bit more difficult to get into. [...] but the scenarios helped us a lot to be more credible in that debate. [...]” (Project manager, industry initiative)</i></p>
Specifying an inter-organizational issue scope	<p><i>“ [...] by having a multi-sectoral approach [...] it helps neutralise a lot of the competition issues that might arise between member companies. And I think it kind of helps you focus on what are really the transversal issues, the common areas of concern. [...] within each sector, we had a couple of companies. [...] we had at least a couple of companies which are [...] competitors...in one way or another. But by having different sectors represented in the group, there was a lot of room for constructive dialogue between sectors that bypassed any sector specific issues that companies might have had between themselves.” (Project Manager, Industry Initiative)</i></p> <p><i>“[...] the major benefits of doing this isn’t so much that you put forward particular policy guidelines that will then be incorporated ipso facto in the individual companies but rather to enlarge and set the internal discussions of each company at a different level. I think the solutions have to be found within each individual organisation but it is obviously a lot easier if you’re given a broader picture and possible outcomes of the current situation and of current trends.” (Executive board member, MultiCo)</i></p> <p><i>“So I think there was quite a lot gained by the sharing across sectors, which is why the ultimate document was stronger and more insightful than any one sector could have produced.” (Vice president, ConsuCo)</i></p> <p><i>“[...] that was one of the concerns of the companies involved in this process [...] how do we keep it focused on what we need to know, what we want to learn? As opposed to addressing all the water issues for everybody in the world. And so [...] that was a high priority and a constant concern of how do we keep the</i></p>



## Conduct practices

	<i>business focus?” (Project Manager, Industry Initiative)</i>
Diagnostic sensemaking: Framing of problem	<p><i>“[...] the scenarios were [...] designed to [...] create a deeper understanding of the issues and the constraints that enable individual actions or corporate actions to be more realistic, to avoid some of the pitfalls, and to see where they should be focussing.” (Manager, WatenCo)</i></p> <p><i>“Water may be a local issue but because of the connectivity this is something which we have to manage globally.” (Senior manager, EnerCo)</i></p> <p><i>“The problem of water is, it’s not a single issue. It is about thirty different issues that all just happen to be connected by the molecule of H2O. [...] sometimes it got quite abstract and you know it was more a case of bringing it down to ‘so what does it actually mean to our companies’.” (Vice president, ConCo)</i></p>
Prognostic sensemaking: Framing of solution	<p><i>“And the impact [of the scenarios] was, it confirmed and established that the business sector is very serious about working on water and recognizes that it is a multi-stakeholder issue. [...] there are no straight business solutions to water, that, whatever approaches, we take [...] It has to be a multi-stakeholder approach.” (Vice president, EngiCo)</i></p> <p><i>“[...] there will be access to water issues, you will have them. You cannot continue to believe that you always got access to water. So you have to be prepared to be part of a stakeholder dialogue which decides on who gets water.” (Senior manager, EnerCo)</i></p> <p><i>“[...] the trigger, the link between the scenarios and the [measurement procedure] is that there’s a real understanding that the issues were local, for companies to be able to understand their impacts and map their risks and take action. They needed to have a portfolio understanding of where they were using water in relationship to water availability and sanitation availability and so on. And they needed a tool to do this.” (Vice president, EngiCo)</i></p> <p><i>“I think there was a real need to be able to talk in terms of more tangible things, like water consumption, like water impacts of a company's activities, like the context in which they're operating, which is what the [measurement procedure] should do [...] So having a tool to help them focus, to help focus on where the real issues might be and then bring the insights from the scenario process into the analysis of those issues,</i></p>

	<p>actually, that is a logical, you know, as a process, as a viable process, it combines the two.” (Manager, water imitative )</p> <p>“The pieces of work which we did around the [measurement procedure], in other words, understanding your water footprints and risks. Very clearly that piece of work was driven by the scenarios which sort of anticipated that the business community will be held accountable for its water use. Now, if you then ask yourself, you know, how do we measure that, how do we report that, how do we do that, then there was this big gap and we solved that by developing the [measurement procedure].” (Senior Manager, EnerCo)</p> <p>“[...] if we can be better managers of our water resources, we'll use less. If we use less, we'll do better with the resource. That will have benefits to the company and will certainly have benefits to our process. In the process of doing that, we may even develop new technology or new processes that enhance the productivity of our plants.” (Vice president, MiniCo)</p>
<b>Transfer&amp; translation practices</b>	
Re-contextualising to intra-organizational context	<p>“[...] the information [...] was broadly circulated. You know, we had actually done several workshops, both at [...] the business unit level and more importantly at the senior management level within the company. And the water scenarios were used as part of that [...]” (Manager, EnCo)</p> <p>“Well that – it was over the course of 2005 and into 2006, we were going through this process of trying to strengthen and develop [ConsuCo]’s own water programme. So this did help to inform that process. And we’d brought some of the people who we interviewed or met in the workshops, we brought into [ConsuCo] for discussions with senior executives in [ConsuCo] as well.” (Senior Advisor, ConsuCo)</p> <p>“[...] obviously there was a need certainly to, particularly within production companies, to obviously raise, what shall I say, interest in a completely new aspect if you like. I mean you know production people, they don't like to think about too many other things other than direct production. So it took a little while. But then obviously I had support from, as I say, the CEO who was extremely committed to the project at the time. So that obviously gave it some real impetus to persuade production colleagues that they needed to start to measure some of these things which obviously they weren't measuring at that stage.” (Senior manager, UtiliCo)</p>
Structural anchoring within intra-organizational	<p>“There was actually a whole host of issues, once that position statement and action plan was adopted [...] that this is an area which is important for the long term success of the company. We had a whole host of actions actually around it. We started clearly by establishing you know, our current footprint [...] as part</p>

processes | *of the sustainability position which the company endorsed, the water sustainability position; all of our businesses were basically asked as part of their deliverables to not only measure but have specific targets or networks, you know, around their performance in this area.” (Manager, EnCo)*

| *“[...] we certainly presented [the scenarios] at various groups, and I suppose probably as I said the most direct effect was to actually kick off the work that we did on the plants and products to actually start to analyse all the footprints. So that work started. Then other work that we got involved in, we continued, as I say, with the [measurement procedure], we continued working with the [industry initiative] on that one.” (Senior manager, UtiliCo)*